TEST REPORT
IEC/EN 60065
Audio, Video and Similar Electronic Apparatus: Safety Requirements

Report Reference No. ..... :	LR500161004L
Tested by (name + signature) ..... :	Ki-Kwan Chun
Approved by (name + signature) ..... :	Kyung-Taek Lee
Date of issue ..... :	2010-04-16

Testing Laboratory ..... :	LTA Co., Ltd.
Address ..... :	243 Jubug-Ri, Yangji-Myeon, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, 449-822, Korea.
Testing location/ address ..... :	Same as above

Applicant's Name ..... :	UNIMO Technology Co., Ltd.
Address ..... :	479-12 Bangbae-3Dong, Seocho-Gu, Seoul, 137-820 KOREA

Test Specification:	
Standard ..... :	EN 60065:2002 + A1:2006 + A11:2008
Test procedure ..... :	CE-LVD
Non-standard test method ..... :	N/A

Test Report Form No. ..... :	IECEN 60065G
Test Report Form(s) Originator. ..... :	ASTABEAB
Master TRF ..... :	2006-03

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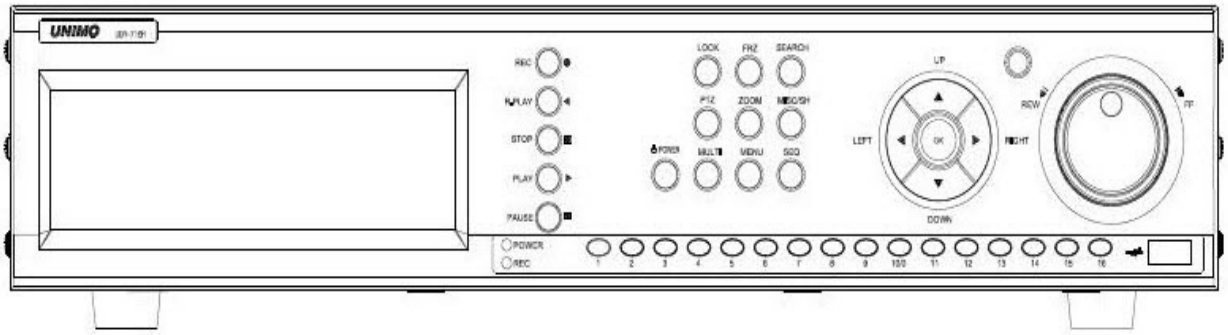
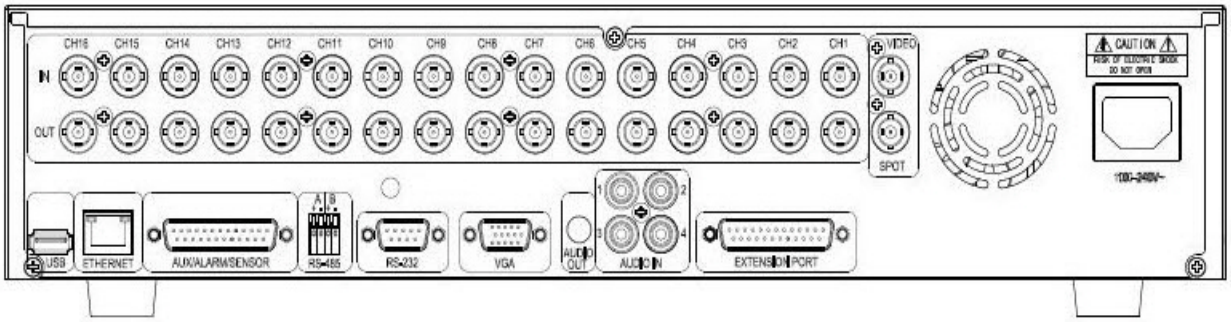
Test item description ..... :	Digital Hard Disk Recorder
Trade mark .....:	***UNIMO***
Manufacturer .....:	Same as applicant.
Model/Type reference.....:	UDR-716E; UDR-716S; UDR-716V; UDR-716U; UDR-716CS; UDR-716CE; UDR-716CV; UDR-716CU; UDR-716HS; UDR-716HE; UDR-716HV; UDR-716HU; UDR-716S-ND; UDR-716E-ND; UDR-716V-ND; UDR-716U-ND; UDR-716CS-ND; UDR-716CE-ND; UDR-716CV-ND; UDR-716CU-ND; UDR-716HS-ND; UDR-716HE-ND; UDR-716HV-ND; UDR-716HU-ND; UDR-708S; UDR-708E; UDR-708V; UDR-708U; UDR-708CS; UDR-708CE; UDR-708CV; UDR-708CU; UDR-708HS; UDR-708HE; UDR-708HV; UDR-708HU; UDR-708S-ND; UDR-708E-ND; UDR-708V-ND; UDR-708U-ND; UDR-708CS-ND; UDR-708CE-ND; UDR-708CV-ND; UDR-708CU-ND; UDR-708HS-ND; UDR-708HE-ND; UDR-708HV-ND; UDR-708HU-ND; UDR-704S; UDR-704E; UDR-704V; UDR-704U; UDR-704CS; UDR-704CE; UDR-704CV; UDR-704CU; UDR-704HS; UDR-704HE; UDR-704HV; UDR-704HU; UDR-704S-ND; UDR-704E-ND; UDR-704V-ND; UDR-704U-ND; UDR-704CS-ND; UDR-704CE-ND; UDR-704CV-ND; UDR-704CU-ND; UDR-704HS-ND; UDR-704HE-ND; UDR-704HV-ND; UDR-704HU-ND; UDR-316C; UDR-308C
Ratings .....:	100–240 V~; 50/60 Hz; Max. 70 W; Class I

Copy of marking plate:

-. Front design



-. Rear design



Summary of testing:

1. The appliance fulfills the requirements of the standard EN 60065:2002 + Amd 1:2006 + Amd 11: 2008.
2. Compliance with European Special National Conditions, Annex ZB, and A-Deviations, Annex ZC is recorded at the end of this report

Test item particulars:

Classification of installation and use.....: Table top

Supply connection.....: Cord connected

Class of equipment.....: Class I

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test item does meet the requirement .....: Pass (P)
- test item does not meet the requirement .....: Fail (F)

Testing:

Date of receipt of test item.....: 2010-02-12

Date(s) of performance of test.....: 2010-02-12 until 2010-04-20

General remarks:

All tests were preformed and based on model UDR-716E

Model differences :

1. UDR-7XX[S/E/V/U]-[ND]

   XX : Channel Number of 04, 08, 16

   [S/E/V/U] : Alternate front design

   [-ND] : No DVD-RW

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report, a comma is used as the decimal separator.

List of test equipment must be kept on file and available for review.

Remarks 1 – Factories

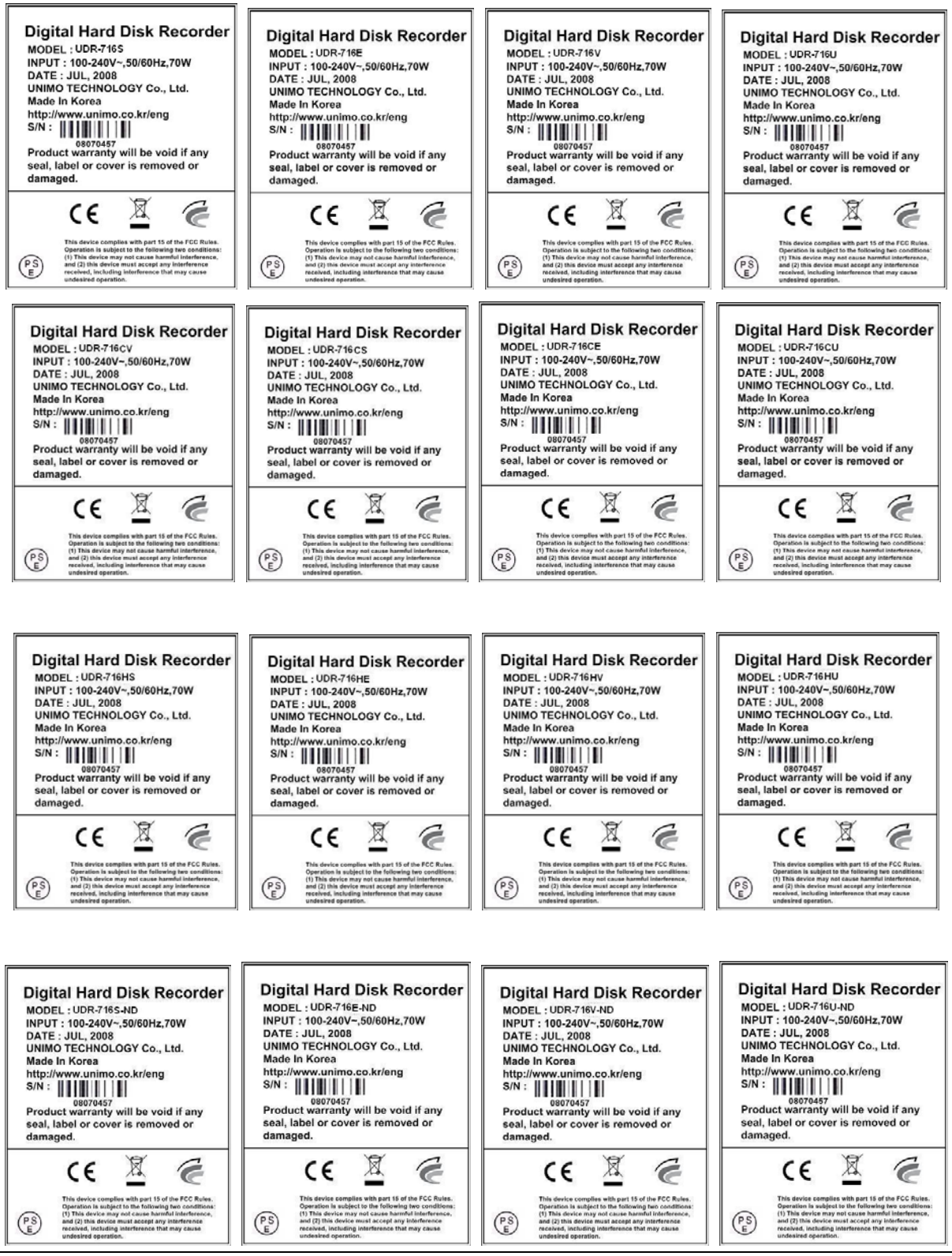
1. UNIMO Technology Co., Ltd.
   479-12 Bangbae-3Dong, Seocho-Gu, Seoul, 137-820 KOREA

Remark 2 – The following contents that are included in this test report are:

1. Test Report: 41 pages
2. Attachment: 4 pages (Photograph)

General product information:

1. This apparatus is for indoor use only.
2. Protection class of apparatus: Class I


Digital Hard Disk Recorder
MODEL : UDR-716S
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716E
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716V
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-716U
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716CV
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716CS
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716CE
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716CU
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716HS
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716HE
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716HV
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-716HU
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-716S-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
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Digital Hard Disk Recorder
MODEL : UDR-716E-ND
INPUT : 100-240V~,50/60Hz,70W
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Made In Korea
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S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-716V-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-716U-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
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S/N : 08070457
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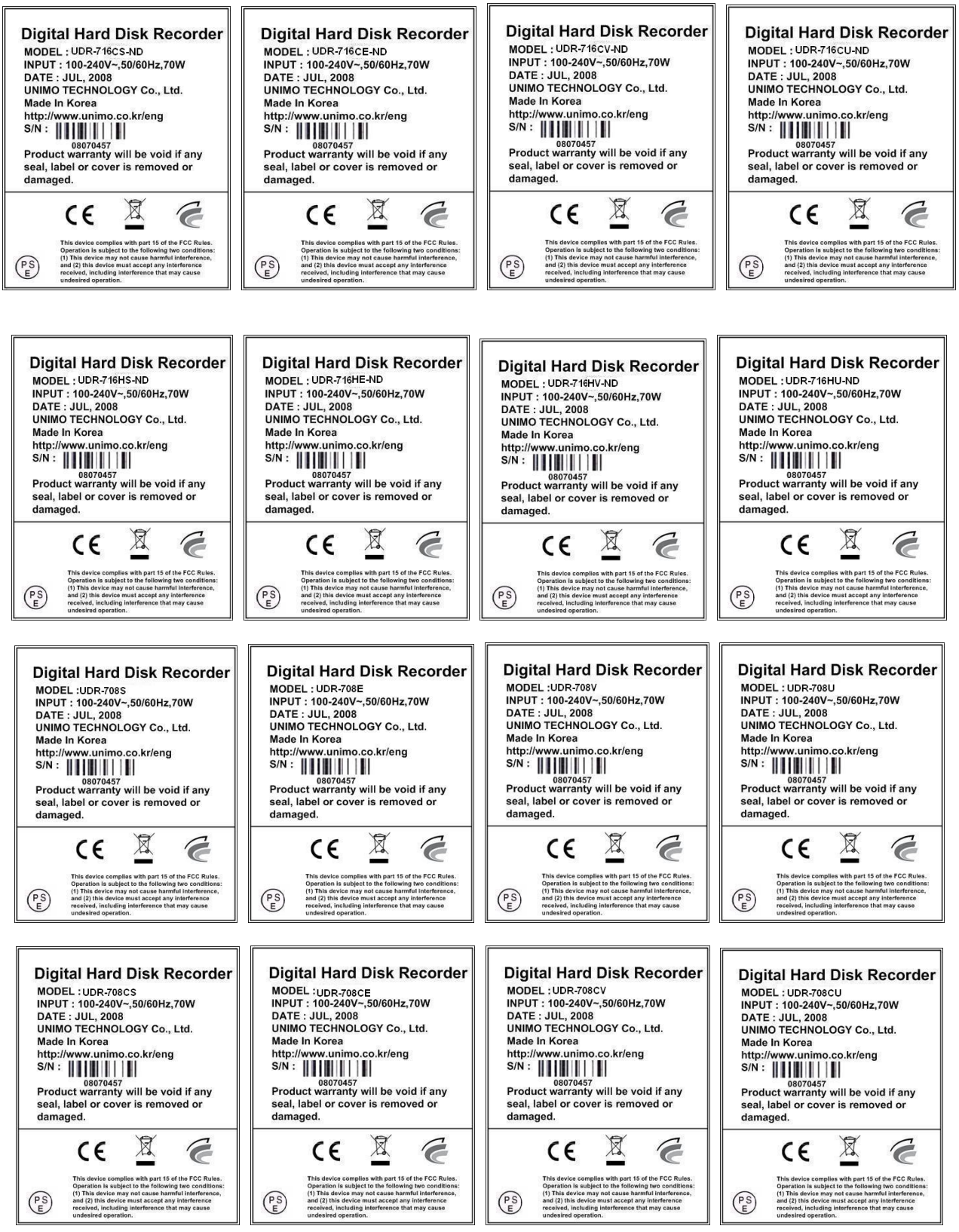
Digital Hard Disk Recorder
MODEL : UDR-716CS-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
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S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL : UDR-716CE-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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Digital Hard Disk Recorder
MODEL : UDR-716CV-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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Digital Hard Disk Recorder
MODEL : UDR-716CU-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL : UDR-716HS-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL : UDR-716HE-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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Digital Hard Disk Recorder
MODEL : UDR-716HV-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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Digital Hard Disk Recorder
MODEL : UDR-716HU-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL :UDR-708S
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL : UDR-708E
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL :UDR-708V
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL : UDR-708U
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL :UDR-708CS
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL :UDR-708CE
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL :UDR-708CV
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Digital Hard Disk Recorder
MODEL : UDR-708CU
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708HS
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708HE
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708HV
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708HU
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708S-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708E-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708V-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708U-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
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Digital Hard Disk Recorder
MODEL : UDR-708CS-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
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Digital Hard Disk Recorder
MODEL : UDR-708CE-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
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MODEL : UDR-708CV-ND
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Digital Hard Disk Recorder
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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708HS-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
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Digital Hard Disk Recorder
MODEL : UDR-708HE-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708HV-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N :
08070457
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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Digital Hard Disk Recorder
MODEL : UDR-708HU-ND
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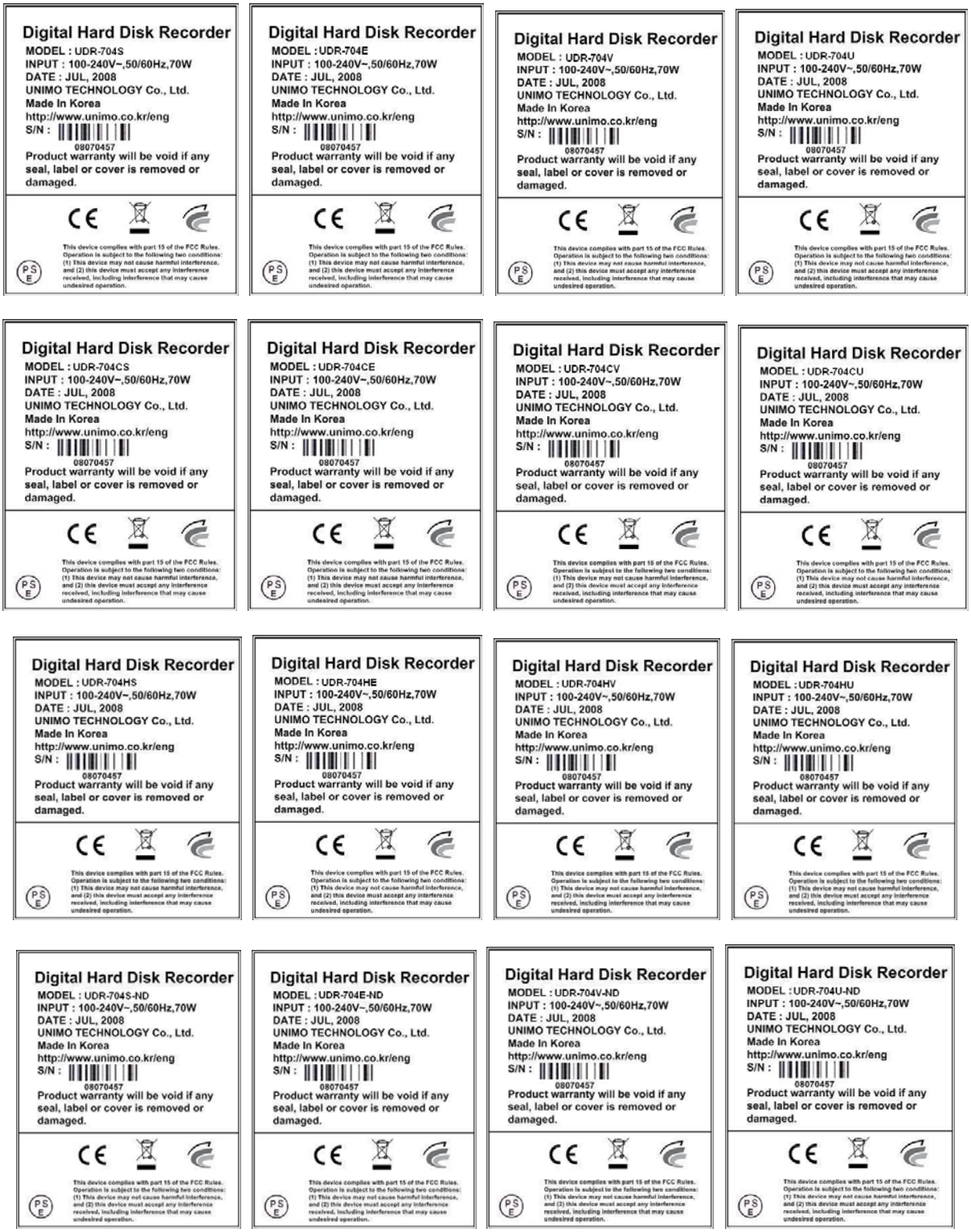
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.


Digital Hard Disk Recorder
MODEL : UDR-704S
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704E
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704V
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704U
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704CS
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704CE
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704CV
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704CU
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704HS
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704HE
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-704HV
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-704HU
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-704S-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-704E-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-704V-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-704U-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
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S/N : 08070457
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Digital Hard Disk Recorder
MODEL : UDR-704CS-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
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Digital Hard Disk Recorder
MODEL : UDR-704CE-ND
INPUT : 100-240V~,50/60Hz,70W
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Digital Hard Disk Recorder
MODEL : UDR-704CV-ND
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Digital Hard Disk Recorder
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Digital Hard Disk Recorder
MODEL : UDR-704HS-ND
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Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704HE-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704HV-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-704HU-ND
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-316C
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.
Digital Hard Disk Recorder
MODEL : UDR-308C
INPUT : 100-240V~,50/60Hz,70W
DATE : JUL, 2008
UNIMO TECHNOLOGY Co., Ltd.
Made In Korea
http://www.unimo.co.kr/eng
S/N : 08070457
Product warranty will be void if any seal, label or cover is removed or damaged.

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
3	GENERAL REQUIREMENTS		–
	Safety class of the apparatus .....:	Class I apparatus	P
4	GENERAL CONDITIONS OF TESTS		–
4.1.4	Ventilation instructions require the use of the test box	No	N/A
5	MARKING		–
	Comprehensible and easily discernible	On bottom	P
	Permanent durability against water and petroleum spirit	Maintained legibly and no curling.	P
5.1	Identification, maker, model .....:	(see the copy of marking plate)	P
	Class II symbol if applicable	Class I apparatus	N/A
	Rated supply voltage and symbol .....:	100-240 V~	P
	Frequency if safety dependant	50/60 Hz	P
	Rated current or power consumption .....:	70 W	P
5.1 i) EN 60065	For RATED POWER CONSUMPTION measurements of TVs reference is made to EN 62087	No TVs	N/A
5.2	Earth terminal	(60417-2-IEC-5019) marked near protective earth terminal as protective earthing conductor.	P
	Hazardous live terminals	No hazardous live terminals	N/A
	Supply output terminals (other than mains)		P
5.3	Use of triangle with exclamation mark	In circuit diagram	P
5.4	Instructions for use	In English	P
5.4.1	Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.	This instruction is expressed on user's manual. "Do not use this appliance near water."	P
	Hazardous live terminals, instructions for wiring	No hazardous live terminals	N/A
	Instructions for replacing lithium battery	The warning is explained on service manual.	P
	Instructions for modem if fitted	No modem	N/A
	Class I earth connection warning	Class I apparatus	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Instructions for multimedia system connection	No connectors for multimedia system	P
	Special stability warning for fixed installation	No fixed installation	N/A
	Warning: battery exposure to heat		P
	Warning: protective film on CRT face		N/A
5.4.1 EN 60065	For a PORTABLE SOUND SYSTEM, a warning that excessive sound pressure from earphones and headphones can cause hearing loss	No PORTABLE SOUND SYSTEM equipment	N/A
5.4.2	Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	Mains plug	P
	Instructions for permanently connected equipment	No permanently connected equipment	N/A
6	HAZARDOUS RADIATION		
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	No ionizing radiation.	N/A
6.1 EN 60065	Directive 96/29/Euratomof 13th May 1996. The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm^2, at any point 10 cm from the outer surface of the apparatus < 1 µSv/h (0,1 mR/h)		N/A
6.2	Laser radiation, emission limits to IEC 60825-1 .....:	Class 1	P
	Emission limits under fault conditions .....:	Class 1	P
7	HEATING UNDER NORMAL OPERATING CONDITIONS		–
7.1	Temperature rises not exceeding specified values, no operation of fuse links	(see appended table)	P
7.1.1	Temperature rise of accessible parts	(see appended table)	P
7.1.2	Temperature rise of parts providing electrical insulation	(see appended table)	P
7.1.3	Temperature rise of parts acting as a support or as a mechanical barrier	(see appended table)	P
7.1.4	Temperature rise of windings	(see appended table)	P
7.1.5	Parts not subject to a limit under 7.1.1 to 7.1.4	(see appended table)	P
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C	(see appended table)	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

8	CONSTRUCTIONAL REQUIREMENTS WITH REGARD TO THE PROTECTION AGAINST ELECTRIC SHOCK		–
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare	Considered	P
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	No devices accessible	N/A
8.3	Insulation of hazardous live parts not provided by hygroscopic material	Not used	P
8.4	No risk of electric shock following the removal of a cover which can be removed by hand	No cover removed by hand	N/A
8.5	Class I equipment	All clearances and creepage distances between hazardous live parts and earthed chassis are separated more than 3,0 mm	P
	Basic insulation between hazardous live parts and earthed accessible parts		N/A
	Resistors bridging basic insulation complying with 14.1 a)		P
8.6	Class II equipment and Class II constructions within Class I equipment	Class I apparatus	N/A
	Reinforced or double insulation between hazardous live parts and accessible parts	Class I apparatus. Reinforced insulation provided between hazardous live parts and unearthed accessible parts on power supply board.	P
	Components bridging reinforced or double insulation complying with 14.1 a) or 14.3	No such resistor	N/A
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.1 a)		N/A
	Reinforced or double insulation being bridged with 2 capacitors in series complying with 14.2.1 a)		N/A
	Reinforced or double insulation being bridged with a single capacitor complying with 14.2.1 b)	Sub-class Y1 : C21	P
	Basic insulation bridged by components complying with 14.3.4.3		N/A
8.7	This clause is void		N/A
8.8	Basic or supplementary insulation > 0,4 mm (mm) :		N/A
	Reinforced insulation > 0,4 mm (mm) .....:	Transformer bobbin : Min. 0,78 mm	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Thin sheet insulation (excluding non-separable thin sheet insulation. See 8.22)	Insulation tape of three layers between pri. winding and sec. Winding on transformers(T1 & T2) is used.	P
	Basic or supplementary insulation, at least two layers, each meeting 10.3		N/A
	Basic or supplementary insulation, three layers any two of which meet 10.3		N/A
	Reinforced insulation, two layers each of which meet 10.3		N/A
	Reinforced insulation, three layers any two which meet 10.3	Insulation tape of three layers between pri. winding and sec. winding on transformer is used.	P
8.9	Adequate insulation between internal hazardous live conductors and accessible parts	All wires and cables connected to accessible parts are secured by cable ties from hazardous live parts.	P
	Adequate insulation between internal hazardous live parts and conductors connected to accessible parts	Insulation of wires connected to hazardous live parts is PVC. (> 0,4 mm Thick.)	P
8.10	Double insulation between conductors connected to the mains and accessible parts. Double insulation between internal hazardous live parts and conductors connected to accessible parts.	All wires and cables are PVC. (see clause 8.9)	P
8.11	Detaching of wires	Connector used	P
	No undue reduction of creepages or clearance distances if wires become detached		N/A
	Vibration test carried out .....:	See clause 12.1.2	P
8.12	This clause is void	No mains socket-outlets	N/A
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)	No such pats.	N/A
8.14	Adequate fastening of covers (pull test 50 N for 10 s)	No such cover	N/A
8.15	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges	No risk of damage	P
8.16	Only special supply equipment can be used	No such apparatus designed to be supplied exclusively by a supply apparatus.	N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
8.17	Insulated winding wire without additional interleaved insulation		N/A
8.18	Endurance test as required by 8.17		N/A
8.19	Disconnection from the mains	Mains plug used	P
8.19.1	Disconnect device		P
	All-pole switch or circuit breaker with >3mm contact separation		N/A
8.19.2	Mains switch ON indication		N/A
8.20	Switch not fitted in the mains cord		P
8.21	Bridging components comply with clause 14		N/A
8.22	Non-separable thin sheet material	No non-separable thin sheet insulation	N/A
9	ELECTRIC SHOCK HAZARD UNDER NORMAL OPERATING CONDITIONS		–
9.1	Testing on the outside		P
9.1.1	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation	< 1000 V a.c., < 1500 V d.c.	N/A
9.1.1.1	a) Open circuit voltages		P
	b) Touch current measured from terminal devices using the network in annex D .....:	0,30 mA	P
	c) Discharge not exceeding 45 µC	< 45 µC	P
	d) Energy of discharge not exceeding 350 mJ	15 kV not accessible	N/A
9.1.1.2	Test with test finger and test probe	Both test probe B and probe 13 of IEC 61032	P
9.1.2	No hazardous live shafts of knobs, handles or levers		P
9.1.3	Ventilation holes and other holes tested by means of 4 mm x 100 mm test pin	The test pin did not reach hazardous live parts	P
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032	The test probe 16 did not reach hazardous parts	P
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032	The test probe D did not reach hazardous parts	P
9.1.5	Pre-set controls tested with 2.5 mm x 100 mm test pin (10 N); test probe C of IEC 61032	No pre-set controls	N/A
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s .:	4 V after 2 s	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	If C is not greater than 0,1 µF no test needed		N/A
9.1.7	a) Enclosure sufficiently resistant to external force		P
	Test probe 11 of IEC 61032 for 10 s (50 N)		P
	b) Test hook of fig. 4 for 10 s (20 N)		P
	c) 30 mm diameter test tool for 5 s (100 or 250 N) :	100 N applied	P
9.2	No hazard after removing a cover by hand		N/A
10	INSULATION REQUIREMENTS		
10.1	Insulation resistance (MΩ) at least 2 MΩ min. after surge test for basic and 4 MΩ min. for reinforced insulation .....:	> 100 MΩ	P
10.2	Humidity treatment 48 h or 120 h .....:	48 h	P
10.3	Insulation resistance and dielectric strength between mains terminals	(see appended table)	P
	Insulation Resistance and dielectric strength across BASIC or SUPPLEMENTARY insulation (Class 1)		N/A
	Insulation resistance and dielectric strength across REINFORCED insulation (Class II)		P
11	FAULT CONDITIONS		–
11.1	No shock hazard under fault condition		P
11.2	Heating under fault condition		P
	No hazard from softening solder		P
	Flames extinguish within 10 seconds		P
	Soldered terminations not used as protective mechanism		P
11.2.1	Measurement of temperature rises	(see appended table)	P
11.2.2	Temperature rise of accessible parts	(see appended table)	P
11.2.3	Temperature rise of parts, other than windings, providing electrical insulation	(see appended table)	P
	Temperature rise of printed circuit boards (PCB) exceeding the limits of table 3 by max. 100 K for max. 5 min	Not exceeded	N/A
	a) Temperature rise of printed circuit boards (PCB) to 20.1.3, exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm²	Not exceeded	N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	b) Temperature rise of printed circuit boards (PCB) to 20.1.3 up to 300 K for an area not greater than 2 cm² for a maximum of 5 min		N/A
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N/A
	Class I protective earthing maintained		N/A
11.2.4	Temperature rise of parts acting as a support or mechanical barrier	Temperature rises are within the limits	P
11.2.5	Temperature rise of windings	(see appended table)	P
11.2.6	Temperature rise of parts not subject to the limits of 11.2.1 to 11.2.5	(see appended table)	P
12	MECHANICAL STRENGTH		–
12.1.1	Bump test where mass >7 kg	Mass: 6,56 kg	N/A
12.1.2	Vibration test	No damage & connection loosening	P
12.1.3	Impact hammer test		P
	Steel ball test	2 J; 0,4 m	P
12.1.4	Drop test for portable apparatus where mass < 7 kg	No damage	P
12.1.5	Thermoplastic enclosures strain relief test		N/A
12.2	Fixing of knobs, push buttons, keys and levers		P
12.3	Remote controls with hazardous live parts		N/A
12.4	Drawers (pull test 50 N, 10 s)	No drawers	N/A
12.5	Antenna coaxial sockets providing isolation		N/A
12.6	Telescoping or rod antennas construction		N/A
12.6.1	Telescoping or rod antennas securement		N/A
13	CLEARANCE AND CREEPAGE DISTANCES		–
13.1	Clearances in accordance with 13.3		P
	Creepage distances in accordance with 13.4		P
13.2	Determination of operating voltage		P
13.3	Clearances		P
13.3.1	General		P
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9	(see appended table)	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
13.3.3	Circuits not conductively connected to the mains comply with table 10		N/A
13.3.4	Measurement of transient voltages		N/A
13.4	Creepage distances		P
	Creepage distances greater than table 11 minima	(see appended table)	P
13.5	Printed boards		N/A
13.5.1	Clearances and creepage distances between conductors on printed circuit boards, one of which may be conductively connected to the mains, as in fig. 10		N/A
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)		N/A
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4	Optocoupler (see appended table)	P
	Conductive parts along reliably cemented joints comply with 8.8	Thickness between primary and secondary of optocoupler: ≥ 0,4mm	P
	Temperature cycle test and dielectric strength test		N/A
13.7	Enclosed, enveloped or hermetically sealed parts: not conductively connected to the mains: clearances and creepage distances as in table 12		N/A
13.8	Parts filled with insulating compound, meeting the requirements of 8.8		N/A
14	COMPONENTS		–
14.1	Resistors		N/A
	a) Resistors between hazardous live parts and accessible metal parts	No such resistor used.	N/A
	b) Resistors, other than between hazardous live parts and accessible parts	No such resistor used.	N/A
	Resistors separately approved .....:	No	N/A
14.2	Capacitors and RC units		P
	Capacitors separately approved	Yes (see appended table)	P
14.2.1	Y capacitors tested to IEC 60384-14, 2nd edition ....:	C21, C24, C25 (see appended table)	P
14.2.2	X capacitors tested to IEC 60384-14, 2nd edition ....:	C1 (see appended table)	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2 .....:	No	N/A
14.2.5	Capacitors with volume exceeding 1750 mm³, where short-circuit current exceeds 0,2 A: compliance with IEC60384-1, 4.38 category B or better .....:	< 1750 mm^3 or metal can	N/A
	Capacitors with volume exceeding 1750 mm³, mounted closer to a potential ignition source than table 5 permits: compliance with IEC 60 384-1, 4.38 category B or better .....:	< 1750 mm^3 or metal can	N/A
	Shielded by a barrier acc. to 20.1.4/ table 21 or metal .....:	No barriers	N/A
14.3	Inductors and windings		P
	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.1.4	All parts of transformer and line filter are consist of flammability class V-1 or better	P
14.3.1	Transformers and inductors marked with manufacturer's name and type .....:	Coded number (see appended table	P
	Transformers and inductors separately approved ..:	No	N/A
14.3.2	General	Transformer complies with clause 14.3.3, 14.3.4.1 and 14.3.5.1	P
	Insulation material complies with clause 20.1.4	Complies with clause 20.1.4	P
14.3.3	Constructional requirements		P
14.3.3.1	Clearances and creepage distances comply with clause 13	Complied with the requirements of clause 13	P
14.3.3.2	Transformers meet the constructional requirements	Considered	P
14.3.4.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation)	Reinforced insulation between the pri. and sec. windings : 3 layers of insulation tape	P
	Coil formers and partition walls > 0,4 mm	(see appended table)	P
14.3.4.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions of 14.3.4.2 are met	No such transformer used (Windings of class II construction)	N/A
14.3.4.3	Separating transformers with at least basic insulation	Windings of class II construction	N/A
14.3.5.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)	Double or reinforced insulation between hazardous live windings and accessible conductive parts	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Coil formers and partition walls > 0,4 mm	(see appended table)	P
14.3.5.2	Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal	Windings of Class II construction used	N/A
	Winding wires connected to protective earth have adequate current-carrying capacity		N/A
14.4	High voltage components		N/A
	High-voltage components and assemblies: U > 4 kV (peak) separately approved	No high voltage components used	N/A
	Component meets category V-1 of IEC 60707		N/A
14.4.1	High voltage transformers and multipliers tested as part of the submission		N/A
14.4.2	High voltage assemblies and other parts tested as part of the submission		N/A
14.5	Protective devices		P
	Protective devices used within their ratings	F1; 250V T3.15AL	P
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened	Complied with the requirements of basic insulations	P
14.5.1.1	a) Thermal cut-outs separately approved	No such thermal cut-outs	N/A
	b) Thermal cut-outs tested as part of the submission	Not tested	N/A
14.5.1.2	a) Thermal links separately approved	Not used	N/A
	b) Thermal links tested as part of the submission		N/A
14.5.1.3	Thermal devices re-settable by soldering	No such thermal devices	N/A
14.5.2.1	Fuse-links in the mains circuit according to IEC 60127	(see appended table)	P
14.5.2.2	Correct marking of fuse-links adjacent to holder ....:	F1; 250V T3.15AL	P
14.5.2.3	Not possible to connect fuses in parallel .....:	Only 1 fuse provided. No fuse holder so designed that fuselinks can be connected in parallel	P
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool .....:	No replacement of fuse possible by hand	N/A
14.5.3	PTC-S thermistors comply with IEC 60730-1	Not used	N/A
	PTC-S devices (15 W) category V-1 or better	Not used	N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked		N/A
14.6	Switches		N/A
14.6.1 a)	Separate testing to IEC 61058 including: 10 000 operations Normal pollution suitability Resistance to heat and fire level 3 and Make and break speed independent of speed of actuation V-0 compliance with annex G, G.1.1		N/A
14.6.1 b)	Tested in the apparatus:		N/A
	Switch controlling > 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.3, 14.6.4 and V-0 in annex G, G.1.1		N/A
	Switch controlling > 0.2A with open contact voltage < 35 V (peak)/24 V dc complying with 14.6.3 and V-0 in annex G, G.1.1		N/A
	Switch controlling < 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 in annex G, G.1.1		N/A
14.6.2	Switch tested to 14.6.1 b) constructed to IEC 61058-1 subclause 13.1 and has making/breaking action independent of speed of actuation		N/A
14.6.3	Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use		N/A
14.6.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N/A
14.6.5	Mains switch controlling mains socket outlets additional tests to IEC 60058-1	No socket outlet	N/A
	Socket outlet current marking correct		N/A
14.7	Safety interlocks		N/A
	Safety interlocks to 2.8 of IEC 60950	No safety interlocks	N/A
14.8	Voltage setting devices and the like		N/A
	Voltage setting device not likely to be changed accidentally	No voltage setting devices	N/A
14.9	Motors		N/A
14.9.1	Endurance test on motors	No motors	N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Motor start test		N/A
	Dielectric strength test		N/A
14.9.2	Not adversely affected by oil or grease etc.		N/A
14.9.3	Protection against moving parts		N/A
14.9.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950, Annex B		N/A
14.10	Batteries		P
14.10.1	Batteries mounted with no risk of accumulation of flammable gases		N/A
14.10.2	No possibility of recharging non-rechargeable batteries	No rechargeable batteries	P
14.10.3	Recharging currents and times within manufacturers limits	Max. abnormal charging current: 10 mA	P
	Lithium batteries discharge and reverse currents within the manufacturers limits	Normal reverse charging current: 0 A	P
14.10.4	Battery mould stress relief	No batteries	N/A
14.10.5	Battery drop test	No batteries	N/A
14.11	Optocouplers		P
	Optocouplers comply with Cl. 8	Insulation thickness: > 0,4 mm	P
	Internal and external dimensions to 13.1. or alternatively 13.6 (jointed insulation)	Int. > 4 mm Ext. ≥ 6 mm Thick. ≥ 0.4 mm	P
14.12	Surge suppression varistors		P
	Comply with IEC 61051-2	Approved varistor (see appended table)	N/A
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus	Complied	P
	Complies with the current pulse, fire hazard and thermal stress requirements of 14.12	Complied	P

15	TERMINALS		–
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	(see appended table)	P
	Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets		N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Overloading of internal wiring prevented if the apparatus has mains socket outlets		N/A
15.1.2	Connectors for antenna, earth, audio, video or data:		–
	No risk of insertion in mains socket-outlets	Complied	P
	No risk of insertion into audio or video: outlets marked with the symbol of 5.2	No such risk of insertion	P
15.1.3	Output terminals of a.c. adaptors or similar devices not compatible with household mains socket-outlets	Not compatible with household mains socket-outlets	P
15.2	Provision for protective earthing		–
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment	Accessible metal enclosure is reliably connected from protective earth conductor of appliance inlet	P
	Protective earth conductors correctly coloured	Green / yellow	P
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input	Appliance inlet provided	N/A
	Protective earth terminal resistant to corrosion	Combination of mild steel and copper is under the line in annex F	P
	Earth resistance test: < 0,1 Ω at 32 A .....:	0,012 Ω (at 32 A / 1 min.)	P
15.3	Terminals for external flexible cords and for permanent connection to the mains supply		N/A
15.3.1	Adequate terminals for connection of permanent wiring		N/A
15.3.2	Reliable connection of non-detachable cords:	Detachable power cord set and appliance inlet provided	N/A
	Not soldered to conductors of a printed circuit board		N/A
	Adequate clearances and creepage distances between connections should a wire break away		N/A
	Wire secured by additional means to the conductor		N/A
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar		N/A
15.3.4	Soldered conductors wrapped around terminal prior to soldering or held in place by additional means		N/A
	Clamping of conductor and insulation if not soldered or held by screws		N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
15.3.5	Terminals allow connection of appropriate cross-sectional area of conductors, for the rated current of the equipment		N/A
15.3.6	Terminals to 15.3.3 have sizes required by table 16		P
15.3.7	Terminals clamp conductors between metal and have adequate pressure		P
	Terminals designed to avoid conductor slipping out when tightened or loosened	Complied	P
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided	Complied	P
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic	No such terminals	N/A
15.3.9	Termination of non-detachable cords: wires terminated near to each other	Detachable power cord set used	N/A
	Terminals located and shielded: test with 8 mm strand		N/A
15.4	Devices forming a part of the mains plug		N/A
15.4.1	No undue strain on mains socket-outlets	The apparatus does not have a device forming a part of the mains plug	N/A
15.4.2	Device complies with standard for dimensions of mains plugs		N/A
15.4.3	Device has adequate mechanical strength (tests a,b,c)		N/A
16	EXTERNAL FLEXIBLE CORDS		–
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords .....:	PVC	P
	Non-detachable cords for Class I have green/yellow core for protective earth		N/A
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment	Rated input current < 3 A	P
16.3	a) Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages, have adequate dielectric strength		N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	b) Flexible cords not complying with 16.1, withstand bending and mechanical stress (3.2 of IEC 60227-2)		N/A
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions		P
16.5	Adequate strain relief on external flexible cords	Appliance inlet provided	N/A
	Not possible to push cord back into equipment		N/A
	Strain relief device unlikely to damage flexible cord		N/A
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor	Detachable power cord set provided	N/A
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use	Appliance inlet provided	N/A
16.7	Transportable musical instruments and amplifiers fitted with detachable cord set with appliance inlet to IEC 60320-1	No musical instruments and their associated amplifiers	N/A
	Transportable musical instruments and amplifiers fitted with detachable cord sets or with means of stowage to protect the cord		N/A
17	ELECTRICAL CONNECTIONS AND MECHANICAL FIXINGS		–
17.1	Torque test to table 20:		P
	- screws into metal: 5 times	Metal screw for fixing metal enclosure used 3,9 mm of diameter: 1,2 Nm	P
	- screws into non-metallic material: 10 times		N/A
17.2	Correct introduction into female threads in non-metallic material		N/A
17.3	Cover fixing screws: captive		N/A
	Non-captive fixing screws: no hazard when replaced by a screw whose length is 10 times its diameter	Captivity not necessary	N/A
17.4	No loosening of conductive parts carrying a current > 0,2 A	No such parts	N/A
17.5	Contact pressure not transmitted through plastic other than ceramic for connections carrying a current > 0,2 A	No contact pressure transmitted through insulating material	P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder	Appliance inlet provided	N/A
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous	No such devices	N/A
17.8	Fixing devices for detachable legs or stands provided	No such devices	N/A
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected	Not disconnected	P
18	MECHANICAL STRENGTH OF PICTURE TUBES AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		–
	Picture tube separately approved to IEC 61965:	No	N/A
	Picture tube separately approved to 18.1	No	N/A
18.1	Picture tubes > 16 cm intrinsically protected		N/A
	Non-intrinsically protected tubes > 16 cm used with protective screen		N/A
	Protective film as part of implosion protection: edges covered by enclosure		N/A
18.2	Intrinsically protected tubes: tests on 12 samples		N/A
18.2.1	Samples subject to ageing: 6		N/A
18.2.2	Samples subject to implosion test: 6		N/A
18.2.3	Samples subject to mechanical strength test (steel ball): 6		N/A
18.3	Non-intrinsically protected tubes tested to 18.3		N/A
19	STABILITY AND MECHANICAL HAZARDS		–
	Mass of the equipment exceeding 7 kg .....:	7,69 kg	P
	Apparatus intended to be fastened in place – suitable instructions	No	N/A
19.1	Test on a plane, inclined at 10° to the horizontal		N/A
19.2	100 N force applied vertically downwards		N/A
19.3	100 N force, or 13% of weight, applied horizontally to point of least stability.		N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
19.4	Edges or corners not hazardous	There are no hazardous edges or corners when the appliance is operating in normal position	P
19.5	Glass surfaces (exc.laminated) with an area exceeding 0,1 m² or maximum dimension > 450 mm, pass the test of 19.5.1	No glass surface	N/A
19.6	Wall or ceiling mountings adequate		N/A

20	RESISTANCE TO FIRE		–
20.1	Electrical components and mechanical parts		P
	a) Exemption for components contained in an enclosure of material V-0 to IEC 60695-11-10 with openings not exceeding 1 mm in width		N/A
	b) Exemption for small components as defined in 20.1	All components in this apparatus are complied with b).	P
20.1.1	Electrical components meet the requirements of Clause 14 or 20.1.4	All components are complied with this clause 20.1.1.	P
20.1.2	Insulation of internal wiring working at voltages > 4 Kv or leaving an internal fire enclosure, or located within the areas mentioned in Table 21, not contributing to the spread of fire	No wires working at voltages > 4 kV (Insulation of all wires is PVC material)	N/A
20.1.3	Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets V-1 or better to IEC60707, unless used in a fire enclosure	PCB base material is of flammability category V-0 (see appended table)	P
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60707	PCB base material is of flammability category V-0 (see appended table)	P
20.1.4	Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 21 comply with the relevant flammability category in Table 21		P
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13		N/A
	Apparatus with voltages >4kV under normal operating conditions and distances to the enclosure exceed those specified Table 21, flammability classification HB40 or better is required for the enclosure.		N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
20.2	Fire enclosure		N/A
20.2.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1	No voltages exceeding 4 kV	N/A
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled	No internal fire enclosure	N/A
20.2.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure		N/A
Z1 EN 60065	RESISTANCE TO CANDLE FLAME IGNITION		–
	A television set shall be so designed that the likelihood of ignition and the spread of fire caused by a candle flame is reduced.		N/A
	Exemption for the display screen of rear projection TV's		N/A
	Wood and WOOD-BASED MATERIAL with a thickness of at least 6 mm is considered to fulfil the V-1 requirement when applying CLC/TS 62441		N/A
	Television set meet the requirements of CLC/TS 62441	No television set	N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
A	APPENDIX A, ADDITIONAL REQUIREMENTS FOR APPARATUS WITH PROTECTION AGAINST SPLASHING WATER		–
A.5.1	j) Marked with IPX4 (IEC 60529), 5.4.1 a) does not apply		N/A
A.10.2.1	Enclosure provides protection against splashing water		N/A
A.10.2.2	Humidity treatment carried out for 7 days		N/A
B	APPENDIX B, APPARATUS TO BE CONNECTED TO THE TELECOMMUNICATION NETWORKS		–
	Complies with IEC 62151 clause 1		N/A
	Complies with IEC 62151 clause 2		N/A
	Complies with IEC 62151 clause 3 but with 3.5.4 modified to 2.4.10 of this standard		N/A
	Complies with IEC 62151 clause 4 but with 4.1.2, 4.1.3 and 4.2.1.2 modified in accordance with annex B of this standard		N/A
	Complies with IEC 62151 cause 5 but with 5.3.1 modified in accordance with annex B of this standard		N/A
	Complies with IEC 62151 clause 6		N/A
	Complies with IEC 62151 clause 7		N/A
	Complies with IEC 62151 annex A, B and C		N/A
L	APPENDIX L, ADDITIONAL REQUIREMENTS FOR ELECTRONIC FLASH APPARATUS FOR PHOTOGRAPHIC PURPOSES.		–
L5.4	Marking and Instructions		N/A
L9.1.1	Terminals to connection to synchroniser not HAZARDOUS LIVE		N/A
L7.1.5 & L11.2.6	Lithium batteries meet permissible temp rise in Table 3 , unless comply with 6.3.2 of IEC 60086-4		N/A
L14.6.6	Mains switch characteristics appropriate to its function under normal conditions		N/A
			N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

7.1	TABLE: temperature rise measurements		P
	Power consumption in the OFF/Stand-by position of the functional switch (W) .....:	0 /1,8 W	—

Operating conditions

- 500 mA loaded at IF INPUT terminal.
- Continuous operation.

Un (V)	In (A)		Pn (W)		Pout (W)
	50 Hz	60 Hz	50 Hz	60 Hz	
90	0,356	0,361	18,87	18,87	Max. output rated load
100	0,328	0,332	18,63	18,64	Max. output rated load
240	0,174	0,175	18,27	18,28	Max. output rated load
264	0,164	0,165	18,34	18,35	Max. output rated load

	Loudspeaker impedance (Ω) .....:	–	—
	Several loudspeaker systems		N/A
	Marking of loudspeaker terminals		N/A

Monitored point:	dT (K)		Limit dT (K)
	90 V / 60 Hz	264 V / 60 Hz	
1. Transformer (T1) coil	39,8	40,3	75
2. Transformer (T1) core	35,0	36,4	–
3. Transformer (T2) coil	8,7	8,9	75
4. Transformer (T2) core	9,1	9,1	–
5. Line filter (LF1) coil	26,2	15,8	85
7. Heatsink of U1	15,0	12,8	–
8. PC1 body	23,6	28,3	–
9. PC2 body	13,9	13,6	–
10. PC3 body	8,4	8,5	–
11. Electrolytic capacitor (C3) top	12,9	12,7	–
12. Primary connector body, CN1	9,2	8,6	–
13. Internal enclosure	5,6	5,3	–
14. Internal wiring of power supply cord	8,9	8,5	60
15. Power PCB	12,2	11,2	–
16. Top enclosure	9,4	8,9	40
17. Front enclosure	3,1	2,4	60

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

18. Bottom enclosure	4,0	4,1	40
19. Room ambient temperature	25,0	24,4	—

For switching mode transformer (T1) temperature rises were measured with thermocouples placed as close as practicable to the winding. As the result. The permitted temperature rises were 10K less than given in table 3.

	Winding temperature rise measurements					N/A
	Ambient temperature t1 (°C) .....:	—				—
	Ambient temperature t2 (°C) .....:	—				—
Temperature rise dT of winding:		R_1 (Ω)	R_2 (Ω)	dT (K)	Limit dT (K)	Insulation class
—		—	—	—	—	—

7.2	TABLE: softening temperature of thermoplastics			P
Temperature T of part	T - normal conditions (°C)	T - fault conditions (°C)	T softening (°C)	
Primary connector, CN1	34,2	41,4	> 150	

10.3	TABLE: insulation resistance measurements		P
Insulation resistance R between:	R (MΩ)	Required R (MΩ)	
Between mains poles (primary fuse disconnected)	> 100	2	
Between parts separated by basic or supplementary insulation	> 100	2	
Between parts separated by double or reinforced insulation	> 100	4	
Between transformer primary and secondary windings	> 100	4	
Between transformer primary to core	> 100	2	

10.3	TABLE: electric strength measurements		P
Test voltage applied between:	Test voltage (V)	Breakdown	
Mains poles (primary fuse disconnected)	2120 Vd.c.	No	
Between parts separated by basic or supplementary insulation	2120 Vd.c.	No	
Between parts separated by double or reinforced insulation	4240 Vd.c.	No	
Between transformer primary and secondary windings	4240 V d.c.	No	
Between transformer primary to core	2120 V d.c.	No	

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

11.2	TABLE: summary of fault condition tests		P
	Voltage (V) 0,9 or 1,1 times rated voltage .....:	100 V or 240 V	—
	Ambient temperature (°C) .....:	23 – 26	—

fault condition, state component short- or open circuited and components whose temperature rises are measured		supply voltage	result, state effect of fault condition and the duration of the test		
			duration of the test	Input current(A)	result, state effect of fault condition
1. TNR1	S/C	275	<1 s	-	Main fuse F1 was opened. No overheated component. No hazard.
2. BD1(AC to +)	S/C	264	1 s	0	F1 opened. BD1 damaged. No hazard.
3. DB1 (AC to -)	S/C	275	<1 s	-	Main fuse F1 was opened. No overheated component. No hazard.
2. C3	S/C	264	1 s	0	F1 opened. BD1 damaged. No hazard.
3. D10	S/C	264	10 min	0,33	Display unstable. Function keys disabled. No component damaged. No hazard.
4. D1	S/C	264	10 min	0,42	Normal operation. No component damaged. No hazard.
5. D2	S/C	264	10 min	0,015	Immediately unit shutdown. No component damaged. No hazard.
6. U1 (pin 1-4)	S/C	264	1	0	F1 opened. U1 damaged. No hazard.
7. U1 (pin 3-4)	S/C	264	10 min	0,015	Immediately unit shutdown. No component damaged. No hazard.
8. U1 (pin 3-5)	S/C	264	53 min	0,36	Display unstable. Function keys disabled. No component damaged. Temperature stabilized at T1 coil= 69,2 ºC; T2 coil= 37,5 ºC; PCB(U1)= 53,8 ºC; Room ambient= 28,7 ºC. No hazard.

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

fault condition, state component short- or open circuited and components whose temperature rises are measured		supply voltage	result, state effect of fault condition and the duration of the test		
			duration of the test	Input current(A)	result, state effect of fault condition
9. D8	S/C	264	61 min	0,33	Display unstable. Function keys disabled. No component damaged. Temperature stabilized at T1 coil= 69,7 ºC; T1 core= 61,2 ºC; T2 coil= 35,0 ºC; PCB(U1)= 53,0 ºC; Room ambient= 29,5 ºC. No hazard.
10. D7	S/C	264	10 min	0,33	Display unstable. Function keys disabled. No component damaged. No hazard.
11. U6 (1,2)	S/C	264	1 s	0	F1 opened. ZD2 and U6 damaged. No hazard.
12. U6 (2.8)	S/C	264	1 s	0	F1 opened. ZD2 and U6 damaged. No hazard.
13. U6 (2,7)	S/C	264	20 min	0,42	Normal operation. No component damaged. No hazard.
14. C8	S/C	264	10 min	0,015	Immediately unit shutdown. No component damaged. No hazard.
15. C9	S/C	264	10 min	0,014	Immediately unit shutdown. No component damaged. No hazard.
16. C11	S/C	264	10 min	0,014	Immediately unit shutdown. No component damaged. No hazard.
17. C28	S/C	264	1 hr 17 min	0,373	Display unstable. Function keys disabled. No component damaged. Temperature stabilized at T1coil = 71,7 ºC; T1 core = 66,6 ºC; T2 coil = 36,0 ºC; PCB(U1) = 56,1 ºC; Room ambient= 24.4 ºC. No hazard.

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

fault condition, state component short- or open circuited and components whose temperature rises are measured		supply voltage	result, state effect of fault condition and the duration of the test		
			duration of the test	Input current(A)	result, state effect of fault condition
18. Fan	Blocked	264	2 hr 8 min	0,42	Normal operation. No component damaged. Temperature stabilized at T1coil = 96,2 ºC; T2 coil = 56,4 ºC; PCB(D4) = 80,5 ºC; Room ambient= 24.4 ºC. No hazard.
19. Ventilation	S/C	264	3 hr 50 min	0,42	Normal operation. No component damaged. Temperature stabilized at T1coil = 64.7 ºC; T2 coil = 33.3 ºC, PCB(D4) = 54.7 ºC, Room ambient= 24.4 ºC. No hazard.
20. Output (USB)	S/C	264	2 hr 6 min	0,39	USB Shut-down. Temperature stabilized at T1coil = 67,5 ºC; T2 coil = 36,8 ºC; PCB(D4) = 55,2 ºC; Room ambient= 24.4 ºC. No hazard.
S/C: Short-circuit, **O/C**: Open-circuit, **NCD**: No component damaged					

	Winding temperature rise measurements		N/A
	Ambient temperature t1 (°C) .....:	—	—
	Ambient temperature t2 (°C) .....:	—	—

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

13	TABLES: clearances and creepage distances	P

Rated supply voltage:	250 V	Pollution degree:	2	Material Group:	IIIa
2 N force on internal parts applied:				Satisfactory	
30 N force on outside of conductive enclosure applied:				Satisfactory	

Location	Operating Voltage		Clearance (mm)		Creepage (mm)	
	V rms	V peak	Min	Actual	Min	Actual
Circuits conductively connected to the mains (use Tables 8, 9 and 11): see note below.						
Across mains fuse F1 (B)	240	360	2,0	6,6	2.3	6,6
Across primary directly connected to the mains (B)	240	360	2,0	4,1	2.3	4,1
Optocoupler(PC1) input to output (R)	175	348	4,0	6,3	4.8	6,3
Optocoupler(PC2) input to output (R)	173	348	4,0	6,3	4.8	6,3
Optocoupler(PC3) input to output (R)	173	348	4,0	6,3	4.8	6,3
Primary to Secondary (in Trans. T1) (R)	296	536	4,2	8,3	5.1	8,3
Primary to Secondary (in Trans. T2) (R)	260	408	4,0	7,9	4.2	7,9
Primary to accessible conductive parts (on PCB) (B)	240	360	2.0	7,5	2.3	7,5

Notes:
1. Secondary circuits of Class II apparatus which have connector terminals that could be earthed (e.g. antenna signal input), are subjected to the requirements for circuits conductively connected to the mains in Tables 8 and 9.
2. Floating secondary circuits of Class I apparatus which have connector terminals that could be earthed (e.g. antenna signal input), are subjected to the requirements for circuits conductively connected to the mains in Tables 8 and 9 unless the floating secondary circuit is separated from the primary circuits by an earthed metal screen (e.g. in the power transformer), or the floating secondary circuit is connected to earth via a component such as a capacitor.
3. For insufficient clearances and creepage distances from secondary to secondary circuits and from secondary circuits to earth, see Cl. 4.3.1, 4.3.2 and 11.2.
4. If the minimum creepage distance in Table 11 is less than the minimum required clearance in Tables 8, 9 or 10 as required, then the value for clearance is used as the minimum creepage distance .

"Min" = minimum required.
"Actual = Actual dimensions measured.

14	TABLE: list of critical components and materials	P

Component	Manufacturer/ Trademark	Type/model	Value / rating	Standard	Approval/ Reference

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

Component	Manufacturer/ Trademark	Type/model	Value / rating	Standard	Approval/ Reference
Mains plug	Weihai Honglin Co., Ltd.	HL-013	250 V; 10/16 A	DIN VDE 0620 EN 60799	VDE; NEMKO
	Various	Various	10 A or 16 A; 250 V	DIN VDE 0620 EN 60884-1	VDE or equivalent.*
Mains cord	Hwajin KDK Co.,Ltd.	H05VV-F	H05VV-F 0,75 mm_2 x 3C	DIN VDE 0620 EN 60227-5 EN 60557-1 EN 60227-2	VDE
	Various	Various	3 x 0,75 mm_2	DIN VDE 0281 EN 60227-5 EN 60557-1 EN 60227-2	VDE or equivalent.*
Appliance Coupler	Hwajin KDK Co.,Ltd.	HL-026	250 V; 10 A	DIN VDE 0625 EN 60799 EN 60320-1	VDE; NEMKO
	Various	Various	10 A or 16A; 250 V	DIN VDE 0627 EN 60320-1	VDE or equivalent.*
Appliance inlet	DONG IL Technology	DAC-12	250 V; 10 A	EN 60320-1	TUV-R; VDE
HDD	Samsung Electronics Co., Ltd	HD2524HJ	12 Vdc / 0,7 A; 5 Vdc / 0,5 A	IEC 60950-1 EN 60950-1	TUV-R
Alt.	Seagate Technology Inc	ST3 or 3.5 Series	12 Vdc / Max. 1,5 A; 5 Vdc / Max. 1,5 A	IEC 60950-1 EN 60950-1	TUVNORD; UL
	Various	Various	12 Vdc; 5 Vdc	EN 60950 or EN 60950-1	TUV-R or equivalent. *
DVD Writer	Toshiba Samsung Storage Technology	TS-H653	12 Vdc / 1,5 A; 5 Vdc / 1,0 A or 1,5 A; Class 1	IEC 60950-1 IEC 60825-1	NEMKO
		SH-S203			
CD-RW / DVD Drive	Toshiba Samsung Storage Technology	TS-H493	12 Vdc / 5 Vdc Class 1	IEC 60950-1 IEC 60825-1	NEMKO
		SH-M523			
	Various	Various	+5 Vdc; +12 Vdc; Class 1	EN 60950-1 EN 60825-1	NEMKO or equivalent.*
Fan	Power Logic Technology	PL50B12L	+12 V; 0,09 A; 11,9 Cfm	EN 60950	TUV-PS

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

Component	Manufacturer/ Trademark	Type/model	Value / rating	Standard	Approval/ Reference
Material for front panel, knobs and door	LG Chemical	AF312T / HF-380	V-0 / HB; 60 °C; min. 1,5mm thick.	UL94	UL
	Various	Various	V-0 / HB or better; 60 °C; min. 1,5mm thick.	UL94	UL
PCB	Hwan Duck Electronics	1	V-0; 105 °C	UL94	UL
	Come In Tech	3-V-0	V-0; 105 °C	UL94	UL
	Various	Various	V-0; Min. 105 °C	UL94	UL
Lithium Battery (C641)	Hitachi Maxell Ltd	CR2032 or CR2032H	3 V; Max. abnormal charging current 10 mA; Protected by protection IC (Dallas, DS1339U)	UL 1462	UL (MH12568)
Battery protection IC (U10)	Dallas Semicond-uctor Corp.	DS1339U	TSSOP, 2,97–5,5 V; Max. 85 °C; Te rating is provided by mfg.	UL 60950-1	UL (E99151)
Female connector for CN1	Han Lim Electronics	CH1143-03	250 V; 7 A; 105 °C	DIN VDE 0627	TUV-R
	Various	Various	250 V; 7 A	DIN VDE 0627	TUV-R
Fuse (F1)	ORISEL Co., Ltd.	50F	250V; T3,15AL	EN 60127-1 EN 60127-2	VDE
	ORISEL Co., Ltd.	N51	250V; T3,15AL	UL 248-1 UL 248-14 DENAN	UL; JET (0902-31003-1006A)
Fuse holder	Geo Young Ind.	GF-205B	250 V; 10 A	UL512	UL
X-Capacitor (C1)	Youchang Electronics	WBU 1942	275 V; 0,22 uF; X2	EN 132400, IEC 60384-14 2nd	VDE; SEV; FIMKO
	Pilkor Electronics	PCX2 335M or PCX2 337	275 V; 0,22 uF; X2	EN 132400, IEC 60384-14 2nd	VDE; FIMKO

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

Component	Manufacturer/ Trademark	Type/model	Value / rating	Standard	Approval/ Reference
Varistor (VD1)	Centra Science Corp.	CNR-14D471K	470 Vp Peak Current: 4500 A	CECC 42200	VDE
Line filter (LF1)	Fine Industrial Co., Ltd	LF-50UMC	12 mH min. (pin1-2/pin3-4); Thermal class E	IEC 60065	Tested in apparatus.
Y-Capacitor / C24, C25.	Netron Tech	AA or AD	250 V; 1000 pF; Y1 or Y2	EN 132400, IEC 60384-14 2nd	VDE; FIMKO
	Daemyung	DE or DG	250 V; 1000 pF; Y1 or Y2	EN 132400, IEC 60384-14 2nd	VDE; FIMKO
Electrolytic capacitor (C3)	Various	Various	Min. 400 V; 105 °C; Max. 150 uF.	IEC/EN 60065	Tested in apparatus.
Main transformer (T1)	Fine Industrial	CMP50UM-C	Class A	IEC 60065	Tested in apparatus.
Aux transformer (T2)	Fine Industrial	CMP-50UMA	2 mH±10% (pin1-pin2); Insulation Class E	IEC 60065	Tested in apparatus.
Thermistor (NT1)	Various	Various	5 ohm at 25 °C	IEC 60065	Tested in apparatus.
Bridging capacitor (C21)	Netron Tech	AD	250 V; 2200 pF; Y1	EN 132400 IEC 60384-14 2nd	VDE; FIMKO; SEMKO
	Dae Myung Electronics	DG	250 V; 2200 pF; Y1	EN 132400 IEC 60384-14 2nd	VDE; FIMKO; SEMKO
Heat shrinkable tube for fan lead	Korea Expol	KEHS-225	600 V; 125 °C; VW-1		UL
	Various	Various	Min. 300 V; 105 °C; VW-1		UL
Optocoupler (PC1, PC2, PC3)	Lite-On	LTV817B	Viso = 5000V int. / ext. / thick. : 5,2 / 7,8 / 0,8	DIN VDE 0884 EN 60950-1	VDE; FIMKO
[1]) an asterisk indicates a mark which assures the agreed level of surveillance					

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

Remarks

N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

ZB	ANNEX ZB TO EN 60 065, SPECIAL NATIONAL CONDITIONS		–
2.6.1	DK: certain types of Class I apparatus, see 15.1.1, may be provided with a plug not establishing earthing continuity when inserted in Danish socket-outlets	Class I apparatus	P
13.3.1	NO: In Norway, due to IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230V in case of a single earth fault.		P
15.1.1	DK: mains cord for single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to Heavy Current Regulations Section 107-2-D1		P
	DK: Class I equipment with socket-outlets with earthing contact, or which are intended to be used in locations where protection against indirect contact is required shall be provided with a plug in compliance with Standard Sheet DK 2-1a		N/A
	DK: socket-outlets for providing power to Class II equipment with a rated current of 2,5 A shall have dimensions according to the drawing on page 179 of EN 60 065:2002 other dimensions shall be to IEC 60 083 Standard Sheet C 1a for portable socket-outlets		N/A
	DK: mains socket-outlets with earthing contact shall comply with Heavy Current Regulations Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a		N/A
	GB: equipment fitted with a flexible cable or cord provided with a 13A BS 1363 plug as in Statutory Instrument 1768:94	A power cord set provided with a 13A BS 1363 plug must be supplied when apparatus is sold in the market	P
	IE: equipment fitted with a flexible cable or cord provided with a 13 A plug in accordance with Statutory Instrument 525:97	A power cord set provided with a 13A plug must be supplied when apparatus is sold in the market	N/A
	NO: mains socket-outlets on Class II equipment meet CEE Publication 7 with the following amendments:		N/A
	- dimensions 2,5 A, 250 V socket-outlets shall comply with Standard Sheet I page 180 of EN 60 065:2002		N/A
	- mechanical strength 2,5 A, 250 V socket-outlets tested as specified in EN 60 065, 12.1.3		N/A
	- protecting rim also tested		N/A

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	NO: method b) of 8.1 is not permitted. Double or reinforced insulation is required between parts connected to the mains and parts connected to the public telecommunications network	No TNV circuit provided	N/A
J.2	NO: In Norway, due to IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230V in case of a single earth fault.		P
ZC	ANNEX ZC TO EN 60 065, A-DEVIATIONS		–
5	DE: additional markings required in German language:		N/A
	- cathode ray tubes with an accelerating voltage between 20 kV and 30 kV (marking on the tube)	No CRT	N/A
	- TV receivers whose picture tube has an accelerating voltage between 20 kV and 30 kV		N/A
	- TV receivers whose picture tube has an accelerating voltage greater than 30 kV		N/A
	- TV receivers whose picture tube has an accelerating voltage less than 20 kV		N/A
5.1	IT: additional markings on the outside of the TV receiver in Italian language	No TV receiver	N/A
	IT: user instructions in Italian language including a conformity declaration	Must be provided when sold in the market	N/A
	IT: certification number on the back cover	Must be provided when sold in the market	N/A
14	SE: Switches containing mercury such as thermostats, relays and level controllers are not allowed.		N/A
Amendment A1:2006 for EN 60065:2002			
This attachment considers the CENELEC modifications to IEC 60065/A1:2005 only It can be used in conjunction with IEC TRF IECEN60065G			
5.1 i)	Replace the note by:		
	NOTE: For RATED POWER CONSUMPTION measurements of TVs reference is made to EN62087. Measurements are done in the ON (play) operating mode.	Digital Video Recorder	N/A
5.41	Add the following indent:		

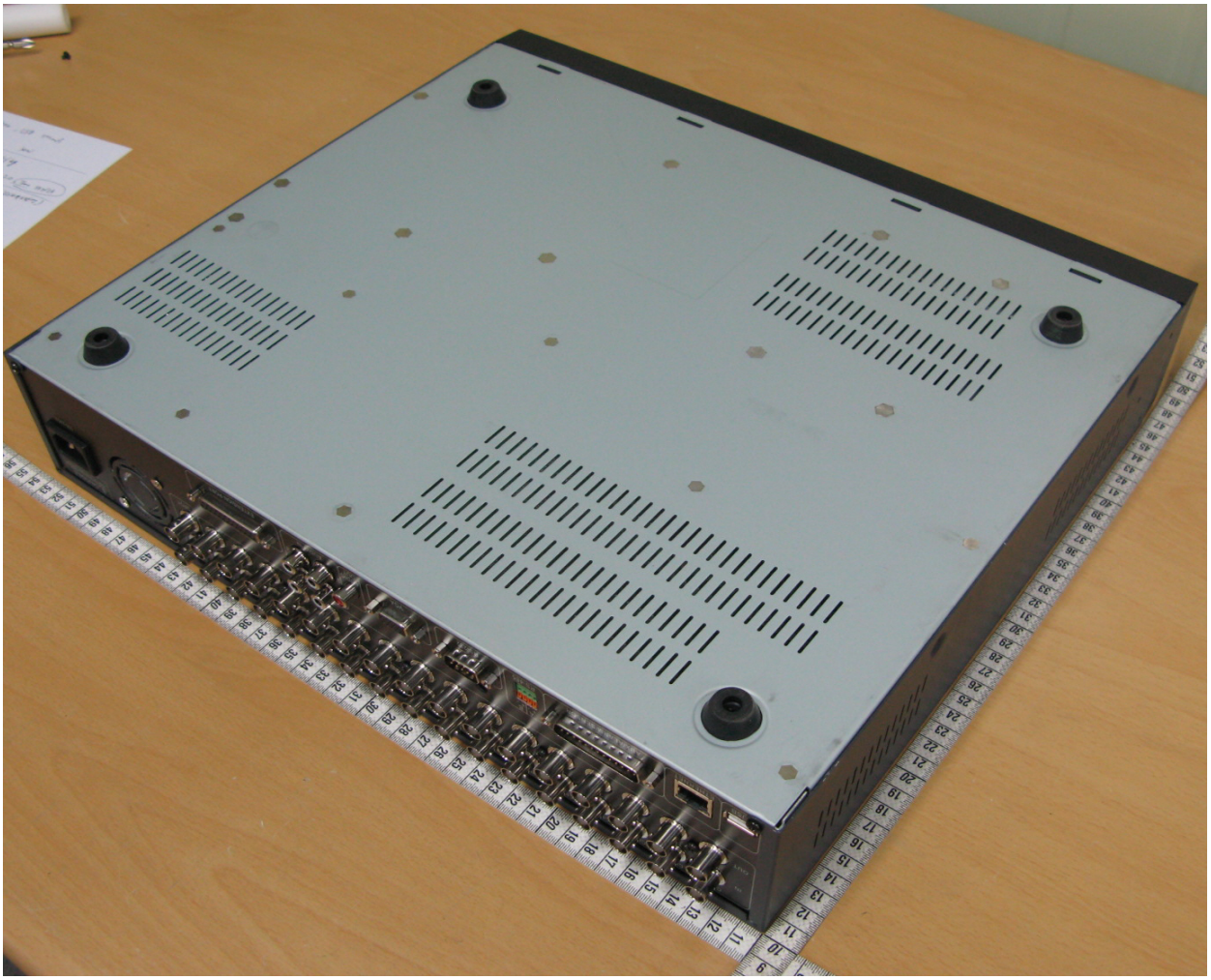
EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	za) A warning that excessive sound pressure from earphones and headphones can cause hearing loss.	No earphones and headphones	N/A
6.1	Replace the subclause by:		
6.1	lionizing radiation	No ionizing radiation	N/A
	Equipment that might produce ionizing radiation is checked by measuring the amount of radiation.		N/A
	The amount of radiation is determined by means of a radiation monitor of the ionizing chamber type with an effective area of 1000 mm2 or by measuring equipment of other types giving equivalent results.		N/A
	Measurements are made with the equipment on fest operating at the most unfavourable supply voltage (See 4.2) and with operator controls and service controls adjusted so as to give maximum radiation whilst maintaining the equipment operative for normal use.		N/A
	Interna1 preset controls not intended to be adjusted during the lifetime of the equipment are not considered to be service controls.		N/A
	At any point 100 mm from the surface of the operator access area, the dose-rate shall not exceed 1 pSv/h (0,1 mR/h) (see Note). Account shall be taken of the background level.		N/A
	NOTE: These values appear in Directive 96/29/Euratom		N/A

Attachment – Photograph

▶**Front view**

Attachment – Photograph

▶**Rear view**



Attachment – Photograph

▶**Inside view**

Attachment – Photograph

▶**SMPS view**